

Language Leap Release 3 Summary

Team Members

Member Name	Student Id	Authored Story Points (Release 3)
Alan Ly	26293484	17 Story Points
Thomas Rahn	26286852	18 Story Points
John Di Girolamo	26202918	13 Story Points
David Siekut	26329810	11 Story Points
Dror Ozgaon	26296742	23 Story Points
Michael Lavoie	29778004	13 Story Points
Kwok-Chak Wan	26291643	13 Story Points
Quang Tran	26339816	25 Story Points

Project Summary

The objective of this project is to teach English through the use of space repetition and television series. The project will consist of a website that will enable users to watch a short segment of a television series. Afterwards, the script of the same segment will appear and will allow the user to highlight the words that he or she does not understand. These words will be explained to the user for the context of the segment they have just watched and they will be continuously quizzed about those words which will make up the space repetition aspect of the product.

Velocity

Sprint - Duration	Story Points Planned	Story Points Completed
Sprint 8 – 2 weeks	40 Story Points	40 Story Points
Sprint 9 – 2 weeks	43 Story Points	43 Story Points
Sprint 10 – 2 weeks	50 Story Points	50 Story Points

Velocity Sprints 1 to 3 = 40 ± 6 Story points

Velocity Sprints 4 to 7 = 33 ± 5 Story points

Velocity Sprints 8 to 10 = 44 ± 6 Story points

Total velocity = 39 ± 6 Story points

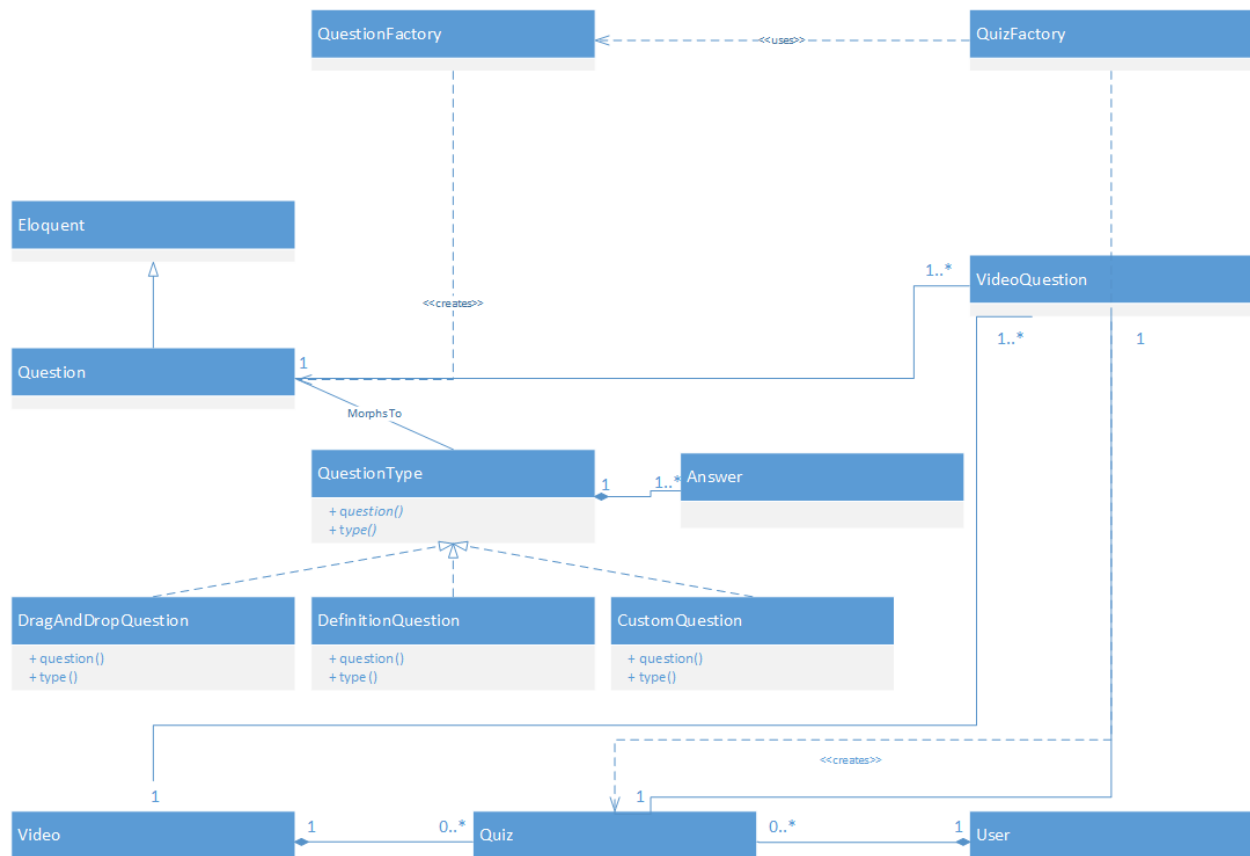
Story Map for Next Release



Overall Architecture and Class Diagram

Quiz System

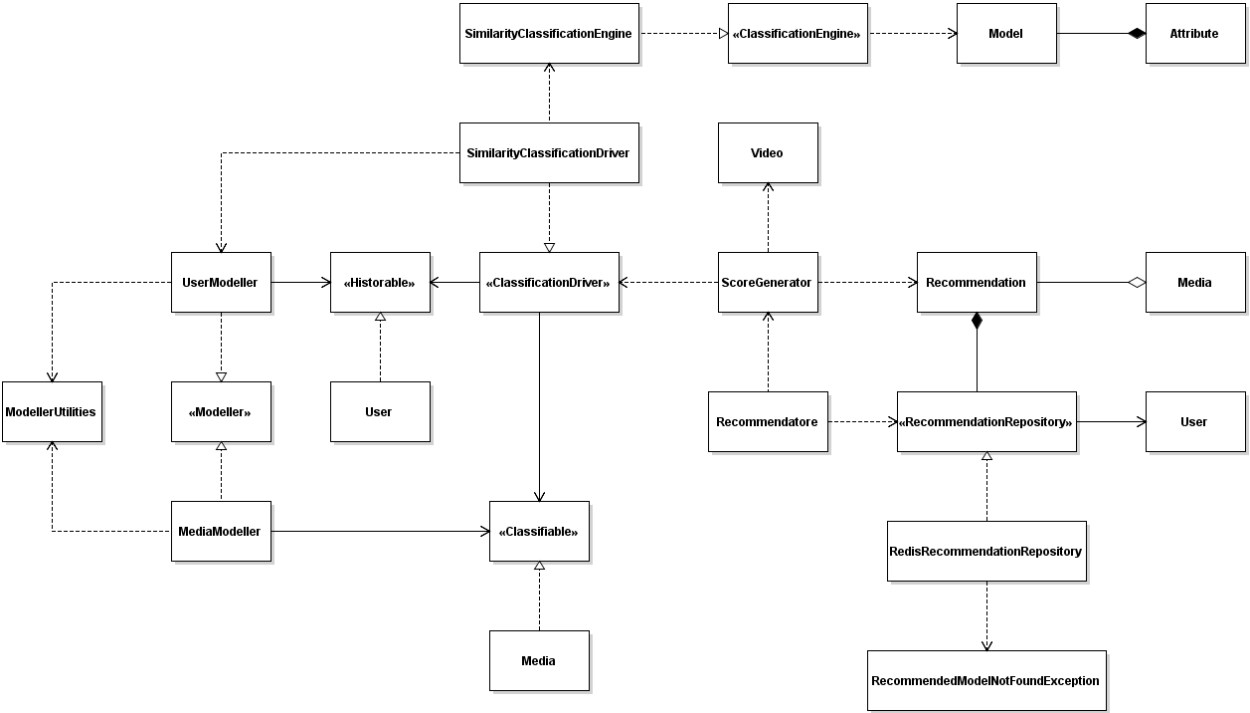
In the diagram below, the new Quiz system is demonstrated. The Quiz system has been slightly reworked in order to accommodate new types of quizzes in the future.



Recommendation System

The diagram below demonstrates how the new Recommendation system works. This system will provide the user with movies, TV shows, or commercials that will teach him new words and that will be to his

interest.



Code – 5 Most Significant Changes

SimilarityClassificationDriver.php	
Primary Author	Alan Ly
Purpose	An intermediary driver class for an underlying classification algorithm engine class, the driver is responsible for accepting a classifiable media instance, comparing it against a user that implements support for viewing history, and then returning the score of the comparison as defined by the underlying engine.
Link	https://github.com/alanly/languageleap/blob/develop/app/LangLeap/Videos/RecommendationSystem/ClassificationDrivers/SimilarityClassificationDriver.php
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiRecommendedVideosTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiViewingHistoryControllerTest.php https://github.com/alanly/languageleap/tree/develop/app/tests/Videos/RecommendationSystem https://github.com/alanly/languageleap/blob/develop/app/tests/Accounts/ViewingHistoryTest.php

CutVideoFFmpegAdapter.php	
Primary Author	Quang Tran
Purpose	Responsible for interfacing with the FFmpeg/libav library in order to properly split the video into the desired segments. Handles the splitting process in an out-of-request queue.

Link	https://github.com/alanly/languageleap/blob/develop/app/LangLeap/CutVideoUtilities/CutVideoFFmpegAdapter.php
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiCutVideoTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/CutVideoFFmpegAdapterTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/CutVideoResponseTest.php

VideoFactory.php	
Primary Author	Thomas Rahn
Purpose	A factory that is responsible for creating Video instances based upon the user input from a request.
Link	https://github.com/alanly/languageleap/blob/develop/app/LangLeap/VideoUtilities/VideoFactory.php
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/VideoUtilities/VideoFactoryTest.php

QuestionFactory.php	
Primary Author	Dror Ozgaon
Purpose	The factory class which is responsible for creating new question instances based on the type of question that is required and the words that have been selected by the user in the script.
Link	https://github.com/alanly/languageleap/blob/develop/app/LangLeap/QuestionUtilities/QuestionFactory.php
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/QuestionFactoryTest.php

ApiRecommendedVideosController.php	
Primary Author	Michael Lavoie
Purpose	The RESTful controller which is responsible for fetching a user's set of recommended videos.
Link	https://github.com/alanly/languageleap/blob/develop/app/controllers/ApiRecommendedVideosController.php
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiRecommendedVideosTest.php

Testing

The team follows a Test Driven Design approach. This means that there are always tests written before any functionality is coded. With that being said, the team performs unit and integration testing on the entire PHP code base. However, the front-end JavaScript is manually tested whenever there are changes since JavaScript is harder to test using automation. To continue, the team enforces a Pull Request method

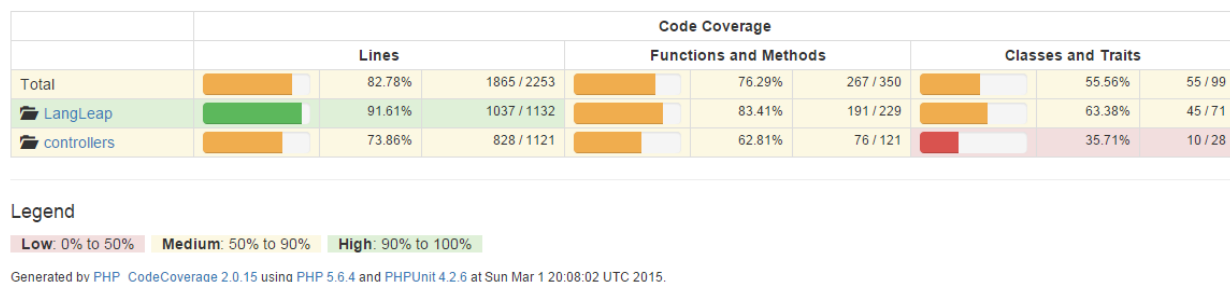
which ensures that the entire code base is reviewed before being pushed in the Develop GIT branch. This ensures that there is code review for any user story that is being pushed. The latter also remedies the fact that JavaScript code is only manually tested. With this approach, the JavaScript code is also reviewed by other team members. In addition, to ensure high quality code which meets standards, all stories require an acceptance test which is part of each story's description.

This release, the team has also taken on integration testing in order to ensure that individual aspects of the project work when integrated. Integration tests can be found in the following link:
<https://github.com/alanly/languageleap/tree/develop/app/tests/Integration>.

All tests can be found in the following link: <https://github.com/alanly/languageleap/tree/develop/app/tests>

The tests have a similar structure to the project's models' structure. This was done purposely in order to ensure an easy mapping between models and tests. The models can be found in the following link: <https://github.com/alanly/languageleap/tree/develop/app/LangLeap>. Furthermore, the tests folder contains Controller and ApiController tests. These tests are made specifically to test that when requesting a URL, the expected behaviour gets executed. The controllers can be found in the following link: <https://github.com/alanly/languageleap/tree/develop/app/controllers>. It is important to note that just like the models, the structure for the controllers is also made to ensure an easy mapping between controllers and tests.

The test coverage can be seen below:



For more coverage statistics please see the attached folder called "Language Leap Test Coverage".

Story Summaries

Sprint 8

LANGLEAP-94 : As a User, I would like to be able to skip the ranking process.	
Story Points	5 Story Points
Risk	Low
Priority	Medium
Tasks	LANGLEAP-129: Create the front-end LANGLEAP-130: Create the back-end
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/Controllers/RankQuizControllerTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/QuizFactoryTest.php

	<p>p</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/QuestionFactoryTest.php</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/QuizTest.php</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/VideoQuestionTest.php</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/AnswerTest.php</p>
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-94

LANGLEAP-42 : As a User, I want to be reminded when I need to be quizzed.	
Story Points	3 Story Points
Risk	Medium
Priority	High
Tasks	LANGLEAP-91: Create functionality to remind user to do quizzes that need to be done.
Relevant Tests	<p>https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/QuizFactoryTest.php</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/QuestionFactoryTest.php</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/QuizTest.php</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/VideoQuestionTest.php</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/AnswerTest.php</p> <p>https://github.com/alanly/languageleap/blob/develop/app/tests/Words/WordInformationTest.php</p>
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-42

LANGLEAP-40 : As a User, I want to see my English level.	
Story Points	5 Story Points
Risk	Low
Priority	High
Tasks	<p>LANGLEAP-87: Create the front-end of the english-level displaying system.</p> <p>LANGLEAP-88: Create the API to view user's english level.</p>
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiUserPanelControllerTest.php
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-40

LANGLEAP-115 : As an Admin, I want to be able to break a large video into segments.	
Story Points	20 Story Points
Risk	High
Priority	Medium
Tasks	<p>LANGLEAP-138: Create the front-end to allow the admin to choose the timeframes where the video will be cut.</p> <p>LANGLEAP-139: Create the back-end functionality to break up an uploaded video into many segments based on the cutoff points chosen by the Admin.</p> <p>LANGLEAP-150: Integrate the front-end into the admin panel.</p> <p>LANGLEAP-159: Design the server side implementation of video split .</p>

Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiCutVideoTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/CutVideoFFmpegAdapterTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/CutVideoResponseTest.php
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-115

Sprint 9

LANGLEAP-136 : As a User, I want to be able to see recommended videos for me.	
Story Points	20 Story Points
Risk	High
Priority	High
Tasks	LANGLEAP-154: Design a naive Bayes classifier (probability based AI). LANGLEAP-155: Modify player UI to show recommended videos. LANGLEAP-156: Create Models for classifier. LANGLEAP-157: Create "Score" System for the classifier.
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiRecommendedVideosTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiViewingHistoryControllerTest.php https://github.com/alanly/languageleap/tree/develop/app/tests/Videos/RecommendationSystem https://github.com/alanly/languageleap/blob/develop/app/tests/Accounts/ViewingHistoryTest.php
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-136

LANGLEAP-120 : As a User, I want an interactive Quiz that will allow me to drag and drop words to complete sentences.	
Story Points	20 Story Points
Risk	High
Priority	Medium
Tasks	LANGLEAP-160: Design interfaces. LANGLEAP-161: Modify Quiz Models. LANGLEAP-162: Modify Quiz Controller Client. LANGLEAP-163: Integrate the New Quiz Models and Controller.
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/QuizFactoryTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Utility/QuestionFactoryTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/QuizTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/VideoQuestionTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Quizzes/AnswerTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/Words/WordInformationTest.php
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-120

LANGLEAP-117 : As a User, I want an account panel where I can change my personal information.	
Story Points	3 Story Points
Risk	Low
Priority	High
Tasks	LANGLEAP-143: Create the front-end for the user to change his personal information. LANGLEAP-144: Create the back-end to allow the user to modify his password, and email.
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiUserPanelControllerTest.php https://github.com/alanly/languageleap/blob/develop/app/tests/ApiController/ApiUserControllerTest.php
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-120

Sprint 10

LANGLEAP-166 : As an Admin, I want to be able to insert SRT-type subtitle. (In progress)	
Story Points	20 Story Points
Risk	Medium
Priority	Medium
Tasks	LANGLEAP-171: Design implementation details.
Relevant Tests	
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-166

LANGLEAP-164 : As a User, I want to be able to review words I did not understand. (In progress)	
Story Points	12 Story Points
Risk	Medium
Priority	Medium
Tasks	LANGLEAP-167: Create Database objects to handle words user needs to review. LANGLEAP-168: Allow for inserting into Incorrect word table. LANGLEAP-169: Create the API to show all words user needs to review. LANGLEAP-170: Create the front end to show the user the words he needs to review.
Relevant Tests	https://github.com/alanly/languageleap/blob/LANGLEAP167/app/tests/Words/WordBankTest.php
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-164

LANGLEAP-151: As a User, I want to be able to watch the next video in sequence once I complete a quiz. (In progress)	
Story Points	10 Story Points

Risk	Low
Priority	Medium
Tasks	LANGLEAP-152: Create the DB models to accommodate video sequence for a media. LANGLEAP-153: Create functionality to redirect user to next sequenced video. LANGLEAP-158: Modify existing admin interface to be able to set the sequence of a video.
Relevant Tests	https://github.com/alanly/languageleap/blob/develop/app/tests/Videos/VideoTest.php
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-151

LANGLEAP-118: As a User, I want to be able to filter the videos based on genre, length, and difficulty.	
Story Points	8 Story Points
Risk	Low
Priority	High
Tasks	LANGLEAP-142: Create a new layout to display Medias.
Relevant Tests	https://github.com/alanly/languageleap/blob/LANGLEAP142/app/tests/Videos/CommercialTest.php https://github.com/alanly/languageleap/blob/LANGLEAP142/app/tests/Videos/MovieTest.php https://github.com/alanly/languageleap/blob/LANGLEAP142/app/tests/Videos/ShowTest.php https://github.com/alanly/languageleap/blob/LANGLEAP142/app/tests/ApiController/ApiFilterControllerTest.php
Link	http://jira.stumpfwerk.com:8080/browse/LANGLEAP-118

Comments from Previous Release

- Quiz has been refactored to have less coupling as requested.
- Licenses have been placed in the Picnik interface created.
- There are currently no plans to render the system commercial. If the product reaches that point, the stakeholder assured us that a different 3rd party “dictionary API” will be purchased. The system is currently designed to easily adapt to that change.
- ApiVideoController has now been refactored to have a VideoFactory class. The logic of creating Videos is now separated from the controller.
- The i18n request has been done.
- The system has been adapted to allow the admin to upload common subtitle formats for the videos.